Department of Natural Resources
New York State College of Agriculture and Life Sciences
CORNELL UNIVERSITY

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PROGRESS REPORT

Evaluation of Skylab Imagery as an Information Service for Investigating Land Use and Natural Resources, (Skylab) NASA Contract: NAS 9-13364.

This report covers the period from November 1 - 30, 1974. During this period, efforts have continued on interviewing different planning agencies in our test site areas on data needs and possible applications of remote sensing data. It is expected that this interviewing period will continue at least through the month of January.

An interpretation test was conducted on an area around Newburgh, NY using S190A imagery with diazo composites constructed from our computerized color prediction model (see September and October Progress Reports). Six categories were chosen on the basis of the black and white densities for each of six areas on the green, red and infra-red (.8 - .9) bands. An area of about 8,000 hectares was interpreted using the composites designated to select and contrast the various categories. These categories included active cropland, pasture land, forest, water, residential, urban core, and extractive. (The last two were lumped to form a single category). Without referencing to any maps and only identifying categories based on the selected hue for that category, 80% of the area was interpreted and 20% was put into an unknown group. The unknown group areas delineated were later compared to LUNR (New York State Land Use maps) so as to fit the area into a category. Before the unknowns were identified, an overall accuracy of 78% was achieved. Filling in the unknown categories, the overall accuracy values increased to about 86%. It was noted that two types of residential areas could be differentiated as well as forested areas that had extensive underlying bare rock or shallow topsoil. More extensive tests are now being planned to determine the full potential of the model in selecting different spectral categories.

An area of 10,000 hectares near Kingston, NY has been selected for intensive interpretative tests. The 1968 LUNR data will be compared to the Skylab data as well as some 1972 air photo coverage. The 1972 coverage will be interpreted so as to closely match the spectral components of the Skylab data to see if new category definitions will aid in the interpretation process.

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